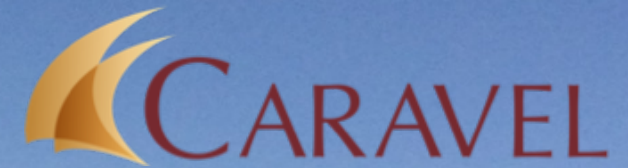


# Investor Presentation

Caravel Minerals Limited (ASX:CVV) | 22 January 2018

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## CALINGIRI

Advancing a World Class Scale Copper Project with  
Proven Bulk Ore Sorting Technologies

# Company Highlights



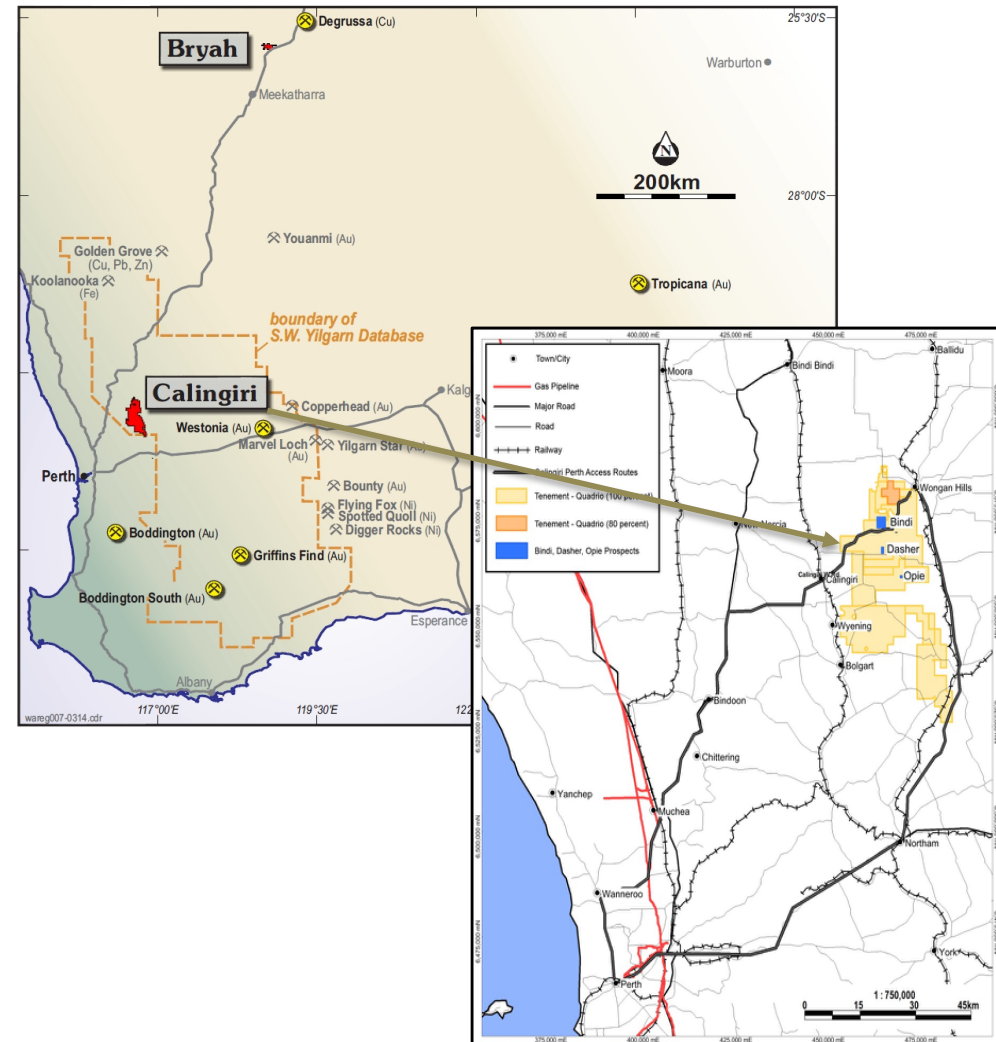
- Rapidly advancing **Calingiri Copper-Molybdenum Project in W.A. (100%)**:

**Large Resource (April 2016):** Maiden JORC Mineral Resource estimate released, ~1.4Mt Cu

**Bulk Ore Sorting (Jan 2018):** Successful testwork confirms potential for major project upgrade. Phase 2 testing underway.

**Resource Optimisation:** Potential for re-optimisations of the existing JORC Resources, exploration for extensions of the existing JORC resources and exploration of recently discovered targets within the Calingiri trend

- **Management:** Experienced, highly skilled team and Board
- **Low Cash Burn:** One of the leanest ASX junior mining companies
- **Forward Strategy:** Complete DFS in 2018/19





# Corporate Snapshot



Shares Outstanding^:	117 M
Options Listed:	0 M
Unlisted:	37 M
Cash^:	\$1.9 M
Debt^:	Nil
Share Price^:	\$0.051
12 months range:	\$0.05 - \$0.12
Avg daily volume:	31 K
Market Cap (undiluted):	A\$6 M

Copulos Group	7.0%
AFR Australia Pty Ltd	6.4%
Capital Sanctuary Victoria Pty	5.8%
T Poustie Group	5.6%
M Hilmer Group	5.6%
Hartree PL	5.3%
BNP Paribas	4.1%
J P Morgan	3.9%
Newstead South Holdings	3.2%
Clarkson Boathouse	3.1%
<b>Total – Top 10 Shareholders^</b>	<b>44.6%</b>
<b>Total – Top 20 Shareholders</b>	<b>65.1%</b>

## Board and Management: 17%

^ 19 Jan 2018

# Ore Sorting Results Exceed Expectations<sup>1</sup>



Successful ore sorting testwork with potential for major project upgrade:

- ☛ Copper grades were beneficiated by an average of 81% (Molybdenum 111%). The highest sample product increase in overall grade of 139% resulted in an encouraging 71% reduction in feed with only a 34% deferral or loss of contained copper
- ☛ Potential to materially reduce plant size and related Capex, decrease cash costs and maintain annual production that could result in vastly improved project economics
- ☛ Significant potential for higher feed grades from sorted ore in the early years of production
- ☛ Further bulk ore sorting testwork with a larger bulk samples > 1 tonne is underway
- ☛ Ongoing review and assessment of other compatible ore sorting technologies



*Photo: Copper Ore Sorting – Glencore CSA, Cobar. Australia*

## Advancing Innovative Green Technologies

1 – See News Release 8<sup>th</sup> Jan 2018 - available on the ASX and the Caravel Website

# Bulk Ore Sorting Outcomes and Benefits

Sorted Samples	Consolidated Pro-Rata Contribution		
	Beneficiated Cu Grade	Increase in Cu Grade	Reduction in Ore Feed
5% product sensitivity	0.44%	83%	58%
10% product " "	0.53%	139%	71%
5% and 7% product " "	0.39%	42%	39%
7% and 10% product " "	0.40%	61%	52%

*Outcomes of Consolidated ore sorting for Copper by Grade and Reduction in Ore Feed*

High-Grade Sorted Samples	Beneficiated Grade PPM	Increase in Grade
Molybdenum	88.3	111%
Silver	1.9	112%

*Outcomes of Consolidated ore sorting for Mo and Ag by highest grade samples*

- 🔸 Bulk ore sorting is a proven pre-concentration technology in which barren gangue is separated from mineralisation based on the grade as measured or inferred from a sensor measurement. With bulk ore sorting, ore that previously didn't qualify for processing may be upgraded, making it economic to treat and improving the resource utilisation
- 🔸 More valuable metal may be extracted from the resource while the processing plant treats less tonnes at higher feed grade, reducing consumption of water and power as well as lower tailings output. Significant capital reductions may also be achieved through smaller back end milling and processing requirements
- 🔸 There are a number of different technologies, based on industry proven, high capacity industrial sorting machines from major international equipment suppliers, with well established businesses in industrial minerals and material recycling

# Bulk Ore Sorting: Proven Technology

- There are a significant number of global suppliers of sorting technology solutions. Caravel are considering a number of suppliers including TOMRA which is a leading global group with over 3,500 employees and an annual turnover in 2016 was A\$1.12B. TOMRA currently have 250 global mining installations:

MARKET	INSTALLATIONS
Europe	70
US / Canada	35
Australia	30
Southern Africa	50
Other	25
<b>TOTAL</b>	<b>250</b>

- The TOMRA technology is currently being successfully used by many large global mining groups, including:

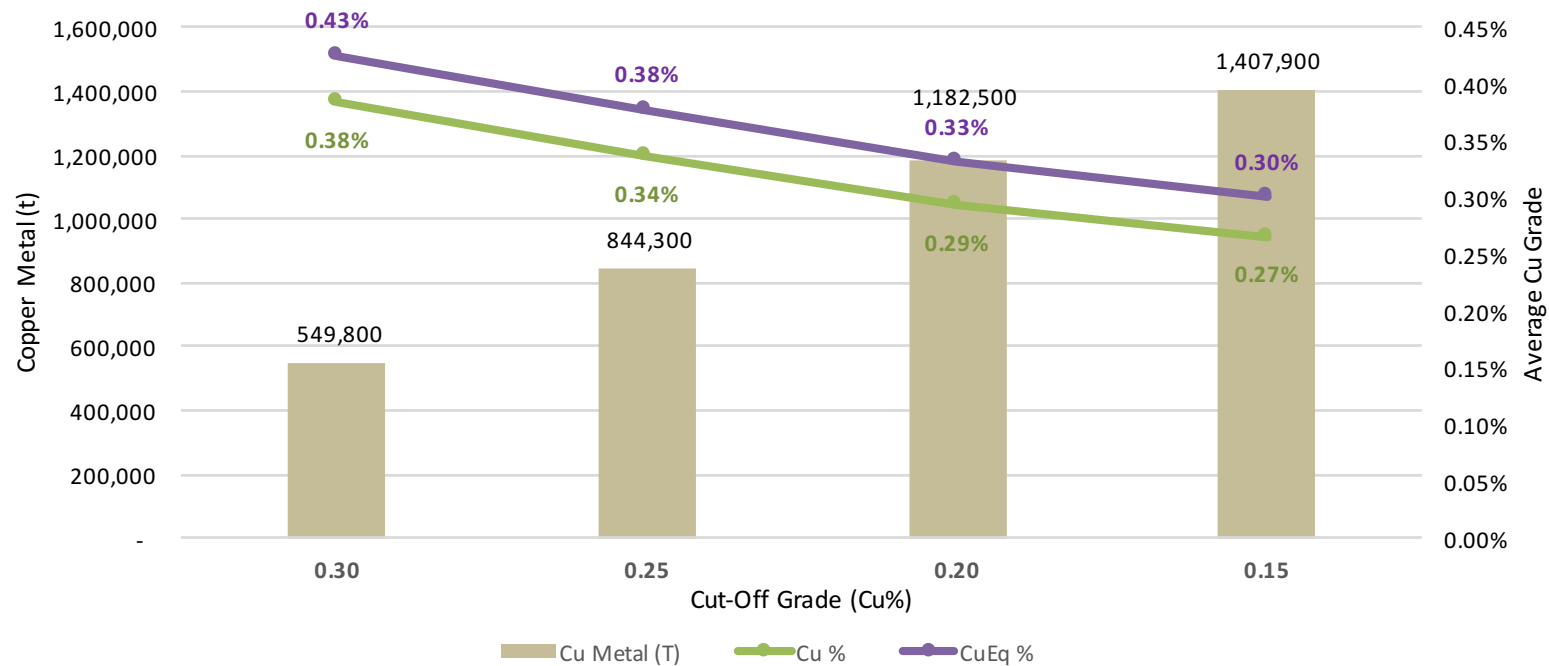


# Calingiri JORC Resource



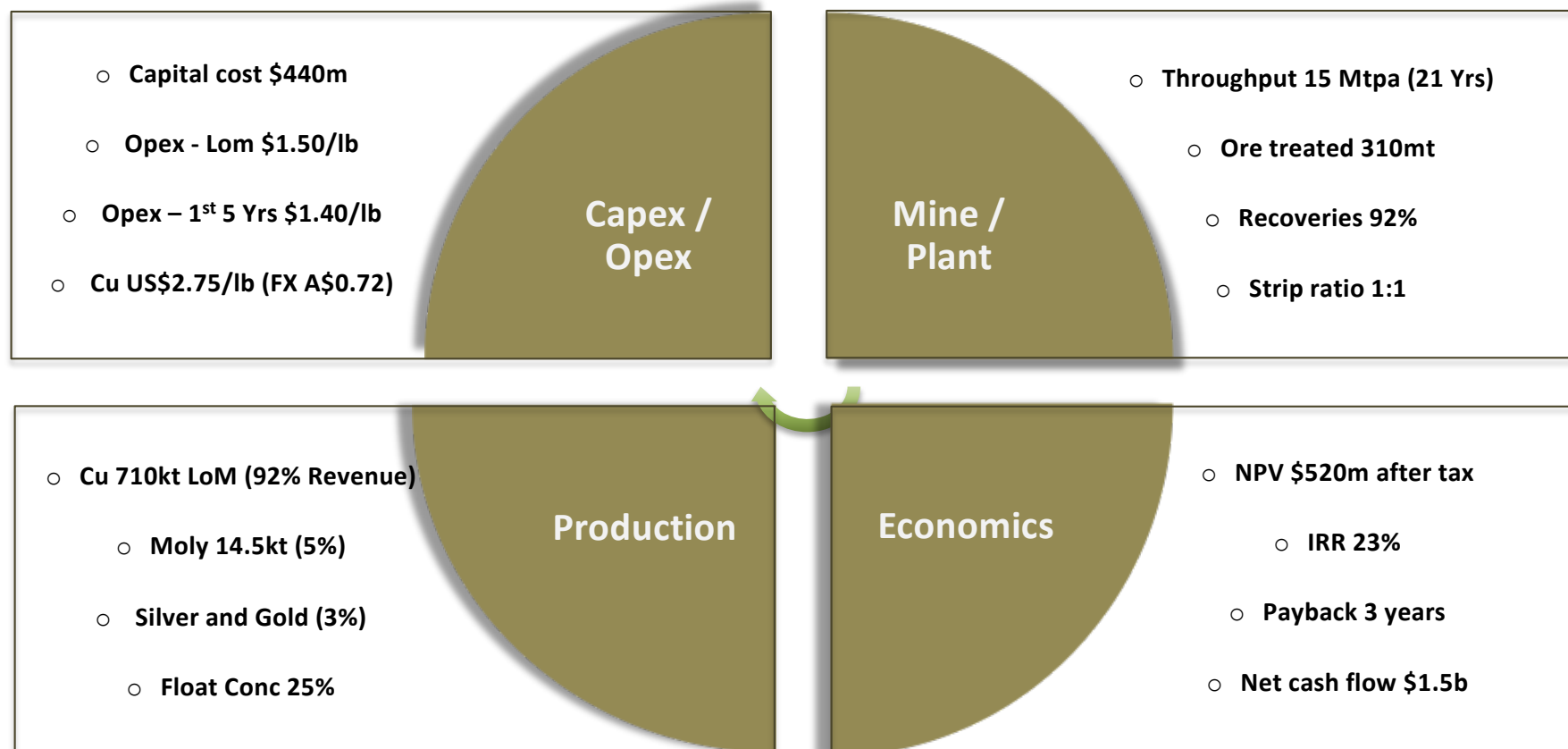
Consolidated Indicated and Inferred Resource Estimate (0.25% Cut-off)				
Classification	Tonnes (MT)	Cu %	Cu Eq % *	Cu Metal (T)
Indicated	187	0.34	0.38	626,300
Inferred	64	0.34	0.38	218,000
<b>Total</b>	<b>251</b>	<b>0.34</b>	<b>0.38</b>	<b>844,300</b>

Grade / Contained Copper Curve



- Refer to Mineral Resource disclosures in various news releases as detailed on page 2. Consolidation of Bindi, Dasher and Opie Prospects

# Scoping Study<sup>1</sup> Key Findings<sup>2</sup>



1 – The Scoping Study requires updating to reflect the improvements from bulk ore sorting testwork. Projected for H1 2018.

2 – Prepared by CSA Global Pty Ltd June 2016. Please read in conjunction with disclosures on page 2 and public releases available on the ASX



# Infrastructure

## Summary

Area	Status	
Buildings	Build requirements detailed and costed	✓
Power Supply	External report completed and costed	✓
Water Supply	Potential water resources within both a perched water table, palaeochannel and bedrock aquifers. Hydrogeological investigations underway	✓
Transport	Sealed roads and railway lines with close proximity to the project site and ports located within Western Australia that are suitable	✓
Tailings Management	External report completed and costed	✓
Site Communication	Located in a first-world highly developed and populated region where telephone and high-speed data infrastructure is in place	✓

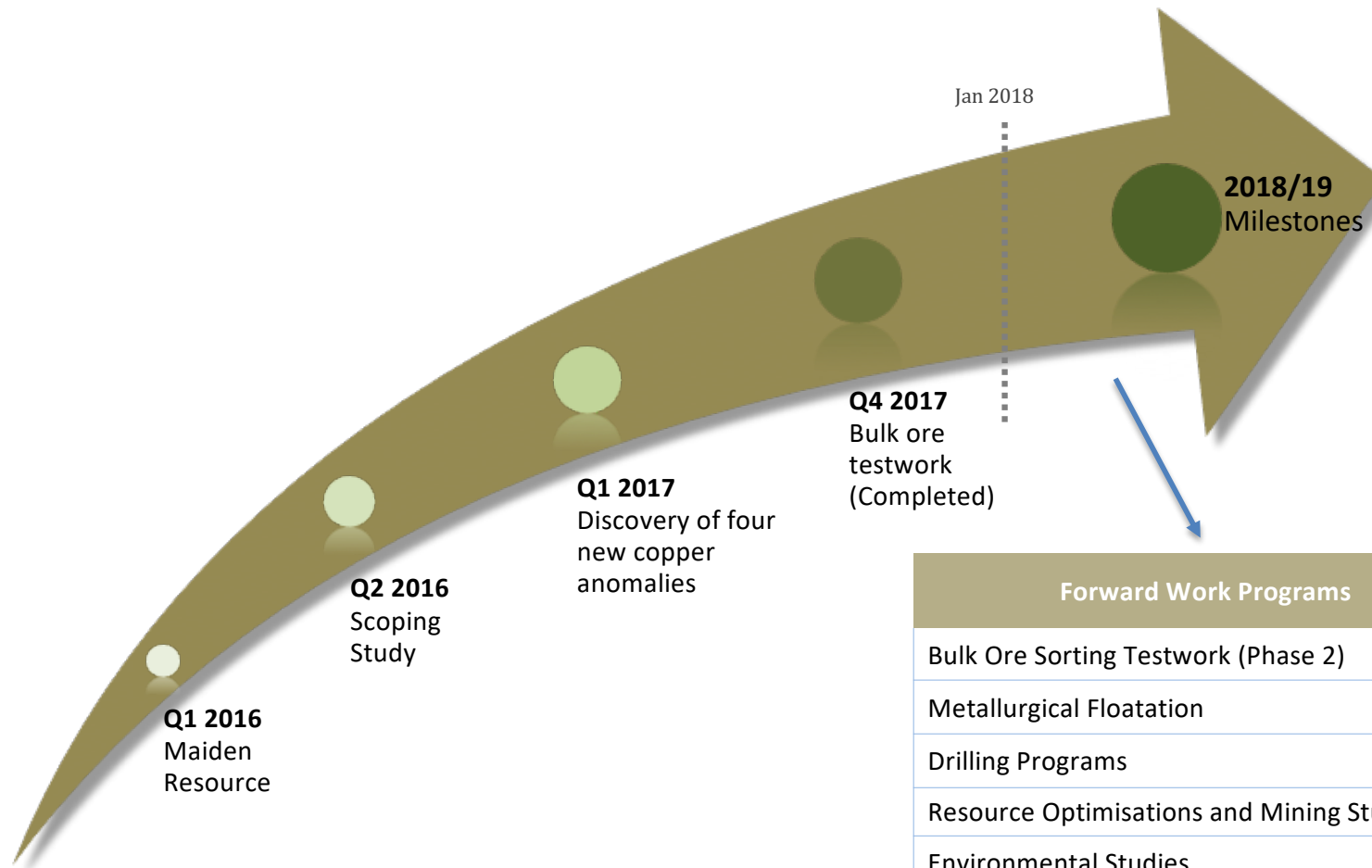
# Global Comparable Copper Studies



	Units	Caravel Minerals Calingiri	Altona Little Eva	Hot Chili Productora	Red Hawk Resources Copper Creek	Sunstone Metals Viscaria
<b>Market Capitalisation</b>	A\$M	\$6	\$77	\$19	\$5	\$40
<b>Study</b>		SS	FS	PFS	SS	SS
<b>Location</b>		Australia	Australia	Chile	USA	Sweden
<b>Key Findings</b>		✓				
Initial LoM	Years	21	14	12	18	8
NPV - pre tax	A\$M	\$799	\$462	\$338	\$231	\$102
- post tax	A\$M	\$520	\$301	\$220	\$154	\$68
- DR	%	7.0	7.5	7.0	7.5	7.0
IRR - pre tax	%	31%	36%	20%	12%	22%
- post tax	%	23%	27%	15%	11%	17%
Capital Cost	A\$M	\$440	\$288	\$725	\$857	\$139
<b>Production (LOM)</b>						
Treatment throughput	Mt p.a.	15.0	7.0	14.7	8.5	1.2
Strip ratio	t:t	1.0	1.8	2.7	4.0	5.8
Quantity ore treated	Mt	310	92	167	156	10
Copper Eq. grade	%	0.30%	0.52%	0.43%	0.74%	1.20%
Recoveries Cu	%	92%	96%	86%	89%	90%
Cu sold	Kt	710	432	527	950	107
Copper price (model input)	US\$Lb	2.75	2.95	3.00	3.00	3.25
Cash Costs (C1)	US\$Lb	1.50	1.65	1.47	1.85	1.86

SS: Scoping Study or Preliminary Economic Assessment. PFS: Preliminary Feasibility Study. FS: Feasibility Study or Definitive Feasibility Study. **GREEN** text cells are estimated as not market released Calingiri Scoping Study June 2016 and other data is from publicly available information. The Scoping Study requires updating to reflect the improvements from bulk ore sorting testwork.

# Calingiri Roadmap



Forward Work Programs
Bulk Ore Sorting Testwork (Phase 2)
Metallurgical Floatation
Drilling Programs
Resource Optimisations and Mining Studies
Environmental Studies
Water, Power and Tailings Studies

# Calingiri Forward Programs 2018

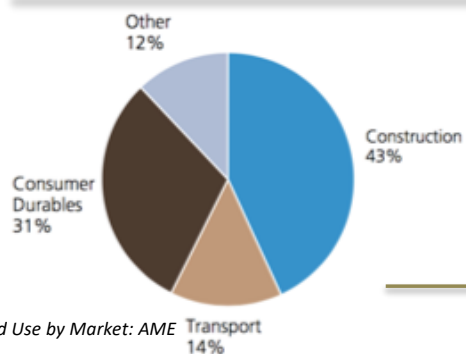


Timing	Forward Work Programs	Milestone
Q1 2018	Bulk Ore Sorting Testwork (Phase 2)	<p>A significantly greater level of confidence that the bulk ore sorting technology (TOMRA) will achieve at least the increased grades as previously reported</p> <p>Review alternative technologies to TOMRA</p>
Q2 2018	Metallurgical Floatation	The recoveries and concentrate grade will be better understood
Q1-2 2018	Drilling Programs	The possibility to increase / optimise JORC Resources will be better known from the evaluation drilling
Q2-4 2018	<p>Resource Optimisations and Mining Studies</p> <p>Desktop Environmental Studies</p> <p>Desktop Water, Power and Tailings Studies</p>	An updated JORC Scoping Study that will reflect the above outcomes and report potential economics

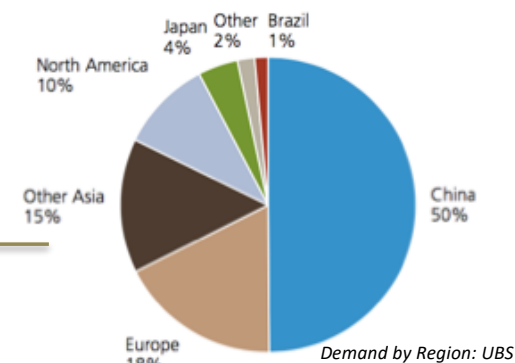
# The Smart Money is on Copper

## Demand Up

Used in nearly every major industry of the world



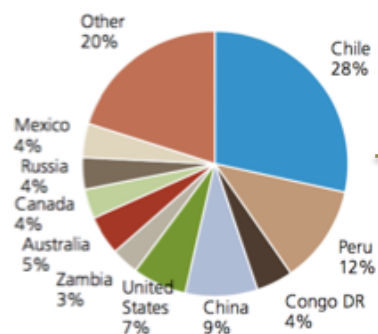
End Use by Market: AME



Demand by Region: UBS

## Supply Risks

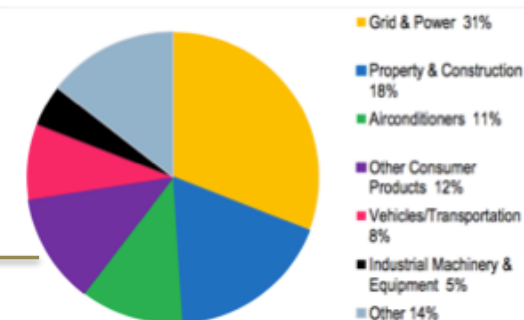
Production delays, lack of major discoveries and mothballing of projects



Supply by Region: UBS, AME  
WBMS

## China Growth

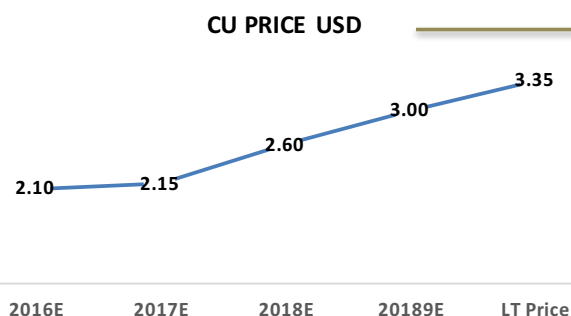
Driving the recovery with India following



China Copper Demand: UBS  
AME WBMS

## Price Outlook

LT Forecast US\$3.35/lb





# A Very High Quality Leadership Team



**MARCEL HILMER**, *CEO and Executive Director*

Mr Hilmer is a Fellow of the Institute of Chartered Accountants and a Member of the Australian Institute of Company Directors with more than 30 years experience in executive management of global public and private groups including 6 years as Business Development Executive with First Quantum Minerals Limited and following as CEO of Forsys Metals for 7 years



**DALE HANNA**, *CFO*

Mr Hanna is a Chartered Accountant with over 15 years in accounting finance and management roles. He commenced his career with Ernst & Young, and has held senior positions with Dominion Mining Ltd and Lemur Resources Ltd. He currently serves as Company Secretary for Helix Resources Ltd. He holds a Bachelor Degree in Commerce majoring in Accounting and Finance from the Curtin University, WA, Australia



**TONY POUSTIE**, *Director of Exploration*

Mr Poustie is a fellow of the Australian Institute of Mining and Metallurgy. He is a geologist with 48 years international experience in mineral exploration, resource definition, project evaluation and development, and mining. He was General Manager Exploration from 1998 until the takeover of Dominion by Kingsgate Consolidated Limited in 2011, when he took on the role of Chief Geologist



**PETER PRING**, *Senior Exploration Geologist*

Mr Pring is a Geologist with over 20 years' experience in the resources sector, having worked extensively in greenfields and mine exploration for a range of gold and base metal mineralisation styles in Australia, PNG and Canada. Peter spent several years at Newmont Mining Corporation and Normandy. He holds a Masters of Economic Geology and a Bachelor of Applied Science with Honors



**PETER ALEXANDER**, *Non-Executive Director*

Mr Alexander has over 40 years experience in the Australian and international mining and exploration industry. He was Managing Director of Dominion Mining Limited for 10 years. Mr Alexander is also Non-Executive Director of the ASX listed company Doray Minerals Limited



**JAMES HARRIS**, *Non-Executive Director*

Mr Harris has had extensive experience in both Government and private enterprise in Australia and overseas. He has worked for ten years with both Alcoa of Australia and the United Group Limited. His qualifications are in Legal Studies and Public Administration and he is a Fellow of the Australian Institute of Company Directors



**DAN RYAN**, *Non-Executive Director*

Mr Ryan is an engineer by profession and has over 35 years experience in managing projects as a senior executive or board level with major engineering groups including E L Bateman, Signet Engineering and Fluor Australia. In 1999 Dan joined First Quantum Minerals as the senior manager of projects and remained with them until 2015. He has managed and executed projects in Australia, Chile, France, Spain, Finland.

# Calingiri Investment Profile

A vertical timeline graphic consisting of a green cylinder with five brown circular markers. Each marker is connected to a horizontal line that points to a specific text item.

Ore sorting beneficiation - potential for material economic improvements

Scoping Study (update in progress to reflect the improvements from bulk ore sorting testwork)  
Open pit mine - low cost - low strip - robust economics - recoveries >90%

Ideal location - infrastructure - local workforce

Vast potential for Resource optimisation and higher feed grade in 2018

No native title and low environmental risk

## Contact Information

### **Corporate and Operations:**

Marcel Hilmer, CEO or  
Tony Poustie, Dir. Of Exploration

L3, 18 Richardson Street  
West Perth WA 6005  
+61 8 9426 6400

### **Corporate Advisors:**

Fivemark Partners  
Lee Bowers (M): +61 407 421 998

# Disclosures and Disclaimer



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## Forward-Looking Statements

This presentation includes certain statements that may be deemed “forward-looking statements”. All statements in this presentation, other than statements of historical facts, that address future production, reserve or resource potential, exploration drilling, exploitation activities and events or developments that Caravel Minerals Limited (the “Company”) expects to occur, are forward-looking statements.

Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond the Company’s control and that Caravel cannot anticipate. These factors include, but are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalize the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

Investors are cautioned that any such statements are not guarantees of future performance and actual results or developments may differ materially from those projected in the forward-looking statements. Readers should not place undue reliance on forward-looking information. The Company does not assume any obligation to update or revise its forward-looking statements, whether as a result of new information, future events or otherwise.

## Competent Person Statement

The information in this report that relates to the Calingiri Mineral Resource estimates is extracted from an ASX Announcement dated 4 April 2016, (see ASX Announcement – 4 April 2016 “Calingiri Maiden JORC Resource”, [www.caravelminerals.com.au](http://www.caravelminerals.com.au) and [www.asx.com.au](http://www.asx.com.au) ). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person’s findings are represented have not been materially modified from the original market announcement.

## Production Targets and Financial Information

Information in relation to the Calingiri Project Scoping Study, including production targets and financial information, included in this report is extracted from an ASX Announcement dated 28 June 2016, (see ASX Announcement – 28 June 2016, “Scoping Study Confirms Outstanding WA Copper Project”, [www.caravelminerals.com.au](http://www.caravelminerals.com.au) and [www.asx.com.au](http://www.asx.com.au)). The Company confirms that all material assumptions underpinning the production target and financial information set out in the announcement released on 28 June 2016 continue to apply and have not materially changed.

# Appendices

## Australian Portfolio

Projects	Status	Target	Location	Holding	Area (km <sup>2</sup> )
CALINGIRI	Granted	Copper, Gold, Molybdenum	WA, Australia	15 tenements – 100% 1 tenement – 80%	750

## Options: 19 Jan 2018

Status	Mn	Exercise Price	Expiry Date
Unlisted	9.7	\$0.12	15/12/18
" "	1.4	\$0.068	28/03/20
" "	0.4	\$0.10	12/05/20
" "	8.4	\$0.075	31/08/19
" "	1.1	\$0.06	23/08/20
" "	15.7	\$0.07	30/06/19
<b>Total</b>	<b>36.7</b>		



# Bulk Ore Sorting Outcomes

*Table 1: Outcomes of Consolidated ore sorting for Copper by Grade and Reduction in Ore Feed*

Sorted Samples	Consolidated Pro-Rata Contribution		
	Beneficiated Cu Grade	Increase in Cu Grade	Reduction in Ore Feed
5% product sensitivity	0.44%	83%	58%
10% product " "	0.53%	139%	71%
5% and 7% product " "	0.39%	42%	39%
7% and 10% product " "	0.40%	61%	52%

*Table 2: Outcomes of ore sorting by Deposit for Copper by Grade and Reduction in Ore Feed*

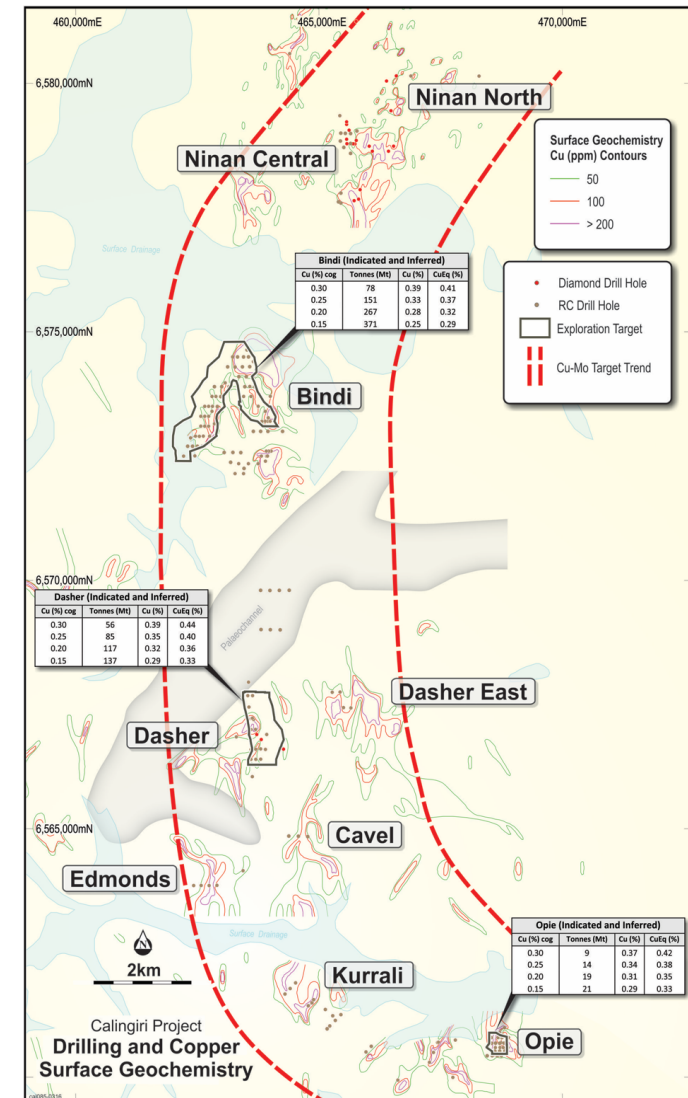
Sorted Samples	Bindi			Dasher		
	Beneficiated Cu Grade	Increase in Cu Grade	Reduction in Ore Feed	Beneficiated Cu Grade	Increase in Cu Grade	Reduction in Ore Feed
5% product sensitivity	0.42%	94%	61%	0.43%	35%	43%
10% product " "	0.55%	155%	74%	0.53%	66%	59%
5% and 7% product " "	0.31%	46%	41%	0.39%	22%	28%
7% and 10% product " "	0.36%	69%	54%	0.40%	26%	43%

*Table 3: Outcomes of Consolidated ore sorting for Mo and Ag by highest grade samples*

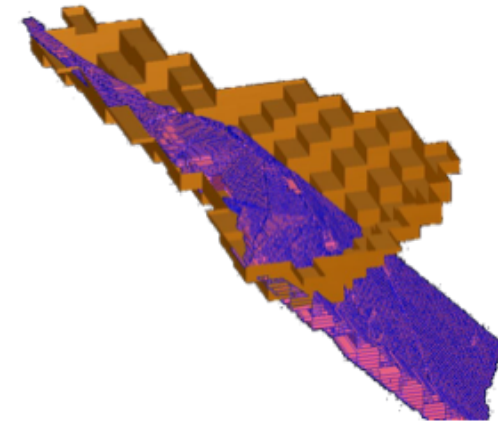
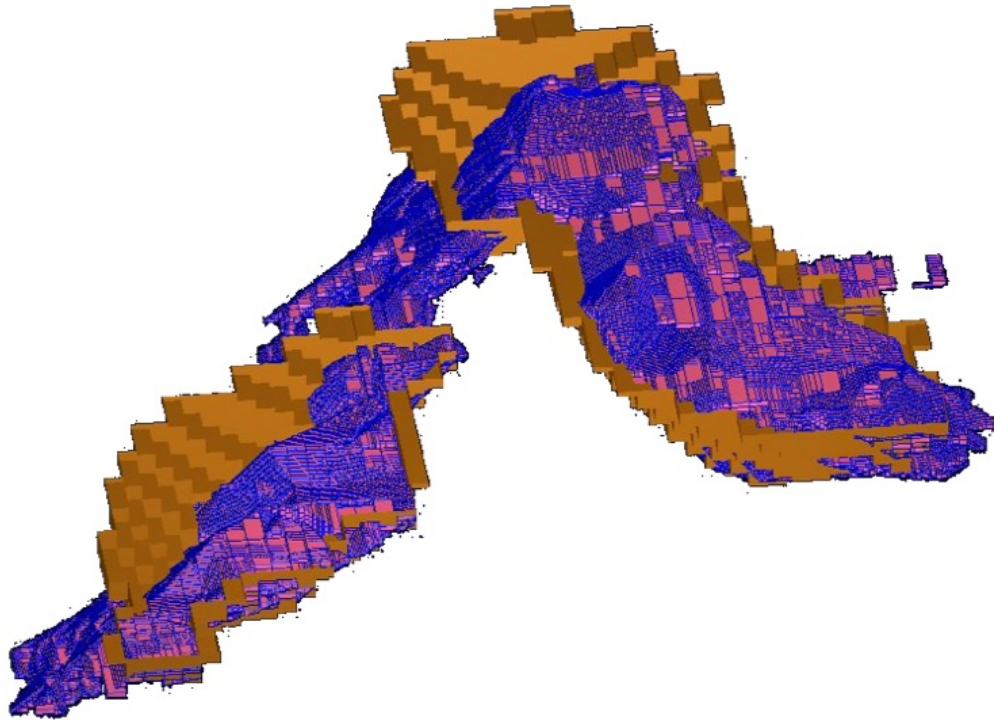
High-Grade Sorted Samples	Beneficiated Grade PPM	Increase in Grade
Molybdenum	88.3	111%
Silver	1.9	112%

# Calingiri Ore Sorting Highlights

- Calingiri's representative bulk ore sorted material copper grades were beneficiated by an average of 81%. The highest sample product increase in overall grade of 139% resulted in an encouraging 71% reduction in feed with only a 34% deferral or loss of contained copper
- Molybdenum and silver were also upgraded by 111% in the high grade product
- Potential to materially reduce plant size and related Capex, decrease cash costs and maintain annual production that could result in vastly improved project economics
- Significant potential for higher feed grades from sorted ore in the early years of production
- Further bulk ore sorting testwork with larger bulk samples of approximately 1-2 tonnes is currently in progress
- Potential to replace reduced ore feed from:
  - re-optimisations of the existing Bindi, Dasher and Opie JORC Resources
  - exploration for extensions of the existing JORC resources and
  - exploration of recently discovered targets within the Calingiri trend

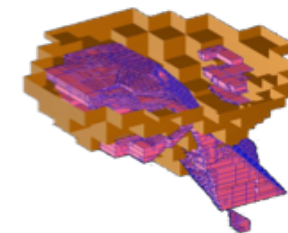


# Calingiri Pit Shells



*Dasher oblique with Cu>0.2%*

- Low cost open pit mining
- Low strip ratio: < 1:1
- Two major pits situated close to the proposed plant



*Opie oblique with Cu>0.2%*